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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,838	09/15/2005	Mitsuaki Kobayashi	58769US004	3727

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EXAMINER	
DESAI, ANISH P	

ART UNIT	PAPER NUMBER
1794	

NOTIFICATION DATE	DELIVERY MODE
12/07/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com
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Office Action Summary	Application No.	Applicant(s)	
	10/549,838	KOBAYASHI ET AL.	
	Examiner	Art Unit	
	ANISH DESAI	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-8,10-15,18,20 and 21* is/are pending in the application.

4a) Of the above claim(s) *7,10-12,20 and 21* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-6,8,13,14 and 18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/28/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I claims 1, 2, 4-6, 8, 10-15, and 18 drawn to an adhesive tape in the reply filed on 10/04/07 is acknowledged. Additionally, Applicant's election of a substrate comprising aliphatic polyester and a temperature-indicating material comprising a higher fatty acid ester species is acknowledged. Claims 2, 4, 8, and 14 read on the elected species. Accordingly, claims 1, 2, 4-6, 8, 13-15, and 18 are examined and claims 7, 10-12, 20, and 21 are withdrawn from consideration and claims 3, 9, 16, 17, and 19 are cancelled. It is further noted that since Applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 5, and 6 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Flam (US 3,661,142).

Flam teaches a temperature sensitive patch comprising a flexible backing having a pressure-sensitive adhesive (PSA) coated on one side and a plurality of color responsive indicators (temperature-indicating material) adhered on the other side thereof (abstract). Each of the indicators displays a color change spectrum according to temperature changes within a different predetermined temperature range (column 2 lines 11-18). Further, the PSA of Flam includes rubber base and acrylate adhesives (column 2 lines 74-75).

Given that Flam teaches what has been set forth above, and specially with regards to claim 1, it is the Examiner's position that the properties of film substrate having an elastic modulus at a temperature below an activation temperature, an elastic modulus at a temperature exceeding the activation temperature, an elongation at break at a temperature exceeding the activation temperature, and color-changing temperature is equal to or greater than the activation temperature as claimed would be present in the invention of Flam. Support for said presumption is based on the fact that the adhesive tapes of both inventions i.e. that of Applicant and Flam comprise a film substrate and an adhesive layer disposed on at least one surface of the film surface. Additionally, a temperature-indicating material is disposed on the film substrates of Flam and Applicant. Moreover, the film substrates of Flam and that of Applicant comprise polyvinyl chloride and polyvinylidene fluoride (see claim 2 of Applicant's invention and column 2 lines 43-49). Thus, the adhesive tapes including the film substrates of Flam and Applicant are structurally and compositionally equivalent. Therefore, the presently claimed properties would have been present. The burden is

upon Applicant to prove it otherwise (see *In re Fitzgerald*, 205 USPQ 594). In addition, the presently claimed properties would obviously have been present once the product of Flam is provided (see *In re Best*, 195 USPQ at 433, footnote 4 CCPA 1977).

3. Claim 1 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yutaka et al. (Machine translation of Abstract and Detailed Description of JP 2001-247828).

Yutaka discloses a reversible temperature sensitive color changing PSA tape (abstract). The PSA tape of Yutaka comprises a reversible temperature sensitive color changing tape substrate 11 wherein a specific reversible thermochromic pigment is fixedly dispersed in the tape substrate and a PSA layer is laminated on one side of the tape substrate (abstract).

Given that Yutaka teaches what has been set forth above, and specially with regards to claim 1, it is the Examiner's position that the properties of a film substrate having an elastic modulus at a temperature below an activation temperature, an elastic modulus at a temperature exceeding the activation temperature, an elongation at break at a temperature exceeding the activation temperature, and color-changing temperature is equal to or greater than the activation temperature as claimed would be present in the invention of Yutaka. Support for said presumption is based on the fact that the adhesive tapes of both inventions i.e. that of Applicant and Yutaka comprise a film substrate and an adhesive layer disposed on at least one surface of the film surface. Additionally, a temperature-indicating material is disposed within the film substrates of Yutaka and Applicant. Moreover, the film substrates of Yutaka and that of Applicant

comprise polyvinyl chloride and polyethylene terephthalate (see claim 2 of Applicant's invention and 0005 of Yutaka). Thus, the adhesive tapes including the film substrates of Yutaka and Applicant are structurally and compositionally equivalent. Therefore, the presently claimed properties would have been present. The burden is upon Applicant to prove it otherwise (see *In re Fitzgerald*, 205 USPQ 594). In addition, the presently claimed properties would obviously have been present once the product of Yutaka is provided (see *In re Best*, 195 USPQ at 433, footnote 4 CCPA 1977).

4. Claims 2, 8, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flam (US 3,661,142) as applied to claim 1 and further in view of Kuckertz et al. (WO 02/36702A). US 2004/0067331A1 to Kuckertz et al. is relied upon as an equivalent for convenience.

The invention of Flam as applied to claim 1 is previously disclosed and it is equally applicable to independent claim 8, claim 13, and claim 15. Specifically the invention of Flam is applicable to claim limitations of an adhesive tape having a film substrate and a first adhesive layer disposed on at least one surface of the film substrate, a temperature-indicating material, and adhesive layer comprising acrylic type of rubber type adhesive as claimed in claims 8, 13, and 15 respectively.

The difference between the claimed invention and the prior art of Flam is that Flam is silent with respect to teaching the film substrate comprising an aliphatic polyester. However, Kuckertz discloses biodegradable tear-off strips for biodegradable packaging materials, comprising a backing film comprising biodegradable aliphatic polyester and/or copolyester (abstract and 0016) and an adhesive layer applied to the

backing film (0018). At paragraph 0008-0009, Kuckertz discloses that use of biodegradable materials is desirable because ordinary packaging materials generate waste. Further, the biodegradable backing films of Kuckertz meets the high mechanical requirements that are placed upon a tear-off strips (0015). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the backing film comprising aliphatic polyester as taught by Kuckertz in the invention of Flam, motivated by the desire to provide biodegradability to the PSA tape of Flam so that when the user discards the tape such a tape would be biodegradable and generates less waste.

With respect to claimed properties of a film substrate having an elastic modulus at a temperature below an activation temperature, an elastic modulus at a temperature exceeding the activation temperature, an elongation at break at a temperature exceeding the activation temperature, and color-changing temperature is equal to or greater than the activation temperature, these properties would be present in the adhesive tape of Flam as modified by Kuckertz. The support for the Examiner's position is based on the fact that the adhesive tapes of Flam as modified by Kuckertz and that of Applicant comprise a film substrate wherein the film substrate comprises an aliphatic polyester and a first adhesive layer is disposed on the film substrate. Thus the presently claimed properties would have been present. The burden is upon Applicant to prove it otherwise (see *In re Fitzgerald*, 205 USPQ 594).

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flam (US 3,661,142) as applied to claim 1 and further in view of Matveev et al. (Abstract of SU 717201A).

The Invention of Flam is previously disclosed. Flam is silent with respect to teaching wherein the temperature indicating material comprises a higher fatty acid ester. However, Matveev discloses a paper strip consisting of paper base with coating formed of a thermo-sensitive substance, a binder, a pigment and a solvent. Further, as a thermosensitive substance esters of stearic acid (higher fatty acid ester) are used (see abstract). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose a temperature-indicating material such as higher fatty acid ester in the invention of Flam, motivated by the desire to form the temperature sensitive patch of Flam.

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flam (US 3,661,142) in view of Kuckertz et al. (WO 02/36702A) as applied to claims 8 and 13, and further in view of Matveev et al. (Abstract of SU 717201A).

The invention of Flam as modified by Kuckertz is previously disclosed. Kuckertz is silent with respect to teaching wherein the temperature indicating material comprises a higher fatty acid ester. However, the invention of Matveev is previously disclosed in Section 5 above. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose a temperature-indicating material such as higher fatty acid ester in the invention of Flam, motivated by the desire to form the temperature sensitive patch of Flam.

7. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flam (US 3,661,142) in view of Kuckertz et al. (WO 02/36702A) as applied to claims 8 and 13, and further in view of Kreckel et al. (US 5,516,581).

The invention of Flam is previously disclosed. Flam is silent with respect to teaching the adhesive tape further comprising a foam layer. However, Kreckel discloses a removable adhesive tape comprising a backing layer and a layer of PSA (abstract). Additionally, the tape backing of Kreckel comprises a second layer of foam (see claim 19). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a foam layer in the adhesive tape, motivated by the desired to enhance the strength of the backing and the adhesive tape.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANISH DESAI whose telephone number is (571) 272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Elizabeth M. Cole/
Primary Examiner,
Art Unit 1794

/A. D./
Examiner, Art Unit 1794
APD